

Winter Overseeding

Every August the bins of seed growers in Oregon, Washington, and Idaho are brimming with the summer harvest. The job of cleaning millions of pounds of turf seed is in full swing. Within a few short weeks, bags of certified seed will arrive at golf courses and sports institutions across the South, just in time for winter overseeding.

The first person who applied annual ryegrass to his dormant bermudagrass could not have possibly imagined that one day that millions of pounds of cool-season turfgrass would grow throughout the South during the winter.

"Once you begin to overseed, it's difficult to stop," points out Dr. Gerald Peppin with Pickseed West. "Golfers, coaches, and players are fairly insistent on overseeded turf once they play on it. The turf manager has little choice but to comply."

Dr. Jeff Krans, professor at Mississippi State University, is surprised that overseeding works as effectively as it does. He oversees one of a small number of overseeding trials in the U.S. "Think about it," he says, "just when the bermudagrass has begun to harden off for the winter, we verticut it, make it compete with other grasses, and then expect it to rebound the following spring. Management is critical to both fall and spring transition and can differ from one area to another."

Overseeding has changed considerably since the days of annual ryegrass. Improved turfgrass varieties and different turf species come into play. Seed companies are responding by providing custom blends and mixtures to fit the needs of turf managers from coast to coast. Improved perennial ryegrasses, *Poa trivialis*, creeping bentgrass, chewings fescue, and even Kentucky bluegrass can be found growing on sports facilities in the South and Southwest from October to May.

Each type of turfgrass has unique characteristics. To avoid problems with transition the turf manager needs to acquire a knowledge of color, speed of establishment, seeding rates, timing, fertility, growth rate, and moisture requirement for each, plus have a firm grasp on what his bermudagrass can tolerate. Even then, he has no control over weather, the chief factor determining the behavior of both the cool- and warm-season grasses.

Perennial ryegrasses dominate the overseeding market. They germinate rapidly, tolerate low cutting heights, resemble bermudagrass in color, and are fine-bladed, upright and wear-tolerant. Unlike fast-growing annual ryegrass, perennial ryegrass' growth is more manageable. Whereas annual ryegrass can fade out rapidly in the spring, perennials offer a slower, smoother transition.

Slow spring transition is cited as a problem by some turf managers with the newer, hardier perennial ryegrasses. Improved ryegrasses have been selected largely for their increased heat tolerance, disease resistance, color and texture. "Turfgrasses need to be vigorous to perform well and recuperate from injuries," states Krans.

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"The question is whether or not you want a grass that is less vigorous so it will have faster spring transition."

Dr. Melodee Kemp at the new Pure Seed Testing research center in Raleigh, NC, hopes to find an answer to both vigor and spring transition of perennial ryegrasses. Her goal is to identify varieties with improved transitioning, more rapid establishment, and lower maintenance requirements. She will be exploring for improved bermudagrass varieties at the same time.

Virgil Meier, turf breeder for Scotts, says that the company's Caravelle has a unique niche since it is more sensitive to heat and transitions faster than most other varieties of perennial ryegrass. Other breeders report that they are also searching for less heat tolerant perennial ryegrasses.

"A good turf manager can handle transition problems for the most part," states Doug Toews with International Seed Inc. "There are a bunch of different manage-

ment practices that can be used in the spring to discourage the ryegrass when you want it to transition out." Common management practices are verticutting, spiking, changing irrigation schedules, and careful fertilization. A lot depends on the weather and the timing of spring events.

One approach to managing transition is mixing perennial ryegrasses with less heat-tolerant grasses such as *Poa trivialis* and chewings fescue. "The demand for *Poa trivialis* has increased significantly," states Bill Dunn with Lofts Seed. "Poa triv goes out quickly with warmer spring temperatures. By mixing it with perennial ryegrasses, spring transition is more manageable."

Lofts' John Dimatteo explains further. "Poa triv has three to four times the number of seeds per pound as perennial ryegrass," he points out. "A mixture of 80 percent ryegrass and 20 percent poa trivialis by weight is roughly a 50:50 mix by seed count. If the poa triv goes out, you're still covered by the ryegrass until the bermudagrass comes out of dormancy."

The same can be said for using a blend of perennial ryegrasses as opposed to using a single variety. Each has particular strengths and transition performance. It's unlikely that all three or more varieties will succumb to warmer spring weather at the same time.

Some of the advantages of *Poa trivialis* are it establishes rapidly, performs well in the shade, and transitions quickly. Due to the small size of the seed, it sifts into the bermudagrass with less surface disruption than larger seed. Its high seed count requires fewer pounds to achieve density.

International Seeds Inc. was the first to offer poa triv for overseeding with Sabre. Lofts introduced Laser last year, Turf Merchants offers Cypress, and Pickseed West sells Colt.

Dimatteo mentioned that some superintendents concerned about winterkill of bermudagrass have been trying straight poa triv.

"The seed works its way into the bermuda canopy better than ryegrass or fescue," he adds, "so you don't have to disturb the surface as much while the bermuda is entering dormancy. It's also less aggressive and does not compete as much with the bermuda, especially in the spring."

Some overseeding mixtures contain chewings fescue. The fescue does not spread like *Poa trivialis* can. In the spring, the upright growth habit provides less shade to the bermuda allowing warmth and sunlight to penetrate the canopy. Chewings also transitions fairly rapidly in the spring.

Chewings fescue and *Poa trivialis* can serve as nurse grasses to creeping bentgrass in overseeding mixtures. Bentgrass takes longer to establish in the fall. "Creeping bentgrass provided superior putting quality in March and April in Florida tests," comments Mike Robinson with Seed Research of Oregon. "The demand for creeping bentgrass for winter overseeding continues to grow. You might want to mix bentgrass with *Poa trivialis* or chewings fescue for fall density."

As with improved perennial ryegrasses, there is some concern over slow spring transition with bentgrasses. In fact, bentgrasses are gaining acceptance as a permanent greens turf further South each year. It small seed and high seed count (nearly five million seeds per pound) are potential benefits.

Scotts offers an overseeding mixture with 10 percent Kentucky bluegrass and 90 percent perennial ryegrass. Like bentgrass,

it is slower to establish in the fall. A member of the *Poa* species, Kentucky bluegrass contributes to density and color in late winter because it can spread.

One important key to spring transition is density, explains Robinson. "Cool-season turfgrasses transition easier in the spring if they are immature. If you give them too much room by seeding at a low rate, the plants mature more quickly. Higher seeding rates produce more immature stands of grass and better transition."

"The turf manager needs to focus on seed count more than price per pound," says Dimatteo. By adding *Poa trivialis* to an overseeding mixture you get the seed count up. You may be able to reduce the number of pounds used by a third and keep the density of the stand roughly the same."

Lofts' Dunn suggests using treated seed for greens to protect against seedling diseases. "Treating the seed with Apron may add a few pennies to the cost per pound, but it provides 21 days of systemic protection." Gustafson, which markets the seed treatment, credits the product for higher survival rates.

One consideration of higher cut turf, such as roughs and athletic fields, is stemminess as the overseeded ryegrass be-

comes reproductive in the spring. "Ryegrasses get stemmy as they try to grow seedheads," explains Steve Tubbs with Turf Merchants. "By using a blend of ryegrasses only a portion of the stand will be stemmy at any one time. The overall quality of the turf is better with blends."

All seed companies report the demand for overseeding mixtures and blends has become very regional in nature. Turf managers compare notes and learn from their seed suppliers what worked well the previous year or two. Overseeding trials are also providing helpful information. Based on this information, custom blends and mixtures, including treated and untreated seed, are now available throughout the South.

Overseeding is becoming less an option and more a necessity. Golf courses and athletic facilities are used year-round. While bermudagrass is recognized as a superior surface for the summer months, it is becoming unacceptable during the winter. Athletes are not willing to accept lower turf standards for four months out of the year. The obvious solution is to manage two different types of turfgrass and overseeding's role in the future looks bright. ●



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